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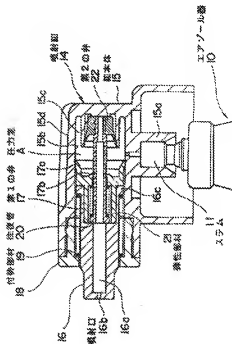
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(54) 【発明の名称】 バイブレーション噴射鉋

## (57) 【要約】

【課題】 耐久性を向上し、明確な間欠噴射を得ることができるようにする。

【解決手段】 使用時、指掛け部15dに指を掛けて鉋本体15を押し下げ、ステム11を押し込んでエアゾール器10内の内容物をステム11から噴出し、鉋本体15の圧力室A内に入れる。そして、その圧力室A内の圧力上昇にとまない、付勢部材19に抗して第1の弁17を揺動して圧力室A内の容積を増大する一方、その第1の弁17とともに往復管20を介してともに第2の弁22を移動し、その第2の弁22を所定量以上移動するとき、鉋本体15に対する該第2の弁22の押し当てを解除して圧力室Aと往復管20内とを連通し、圧力室A内の内容物を往復管20内を通して噴射口16bから噴射する。



44-38861-11

育し、その内容を患部に付着せしむるとともにその同入に映射する内容物を患部をワウサージするパイプレー

0002】

従来の技術】従来、この種のバイブレーションマシンは、

中には、押し下げる入アムを押し込んだとき、入アムから噴出されるエアゾール器内の内容物を餌本体の圧力

て噴射口から噴射する一方、その噴射による圧力の低下  
 こともない弁を閉じて噴射を中断し、その後圧力室内

王が上昇すると、再度内射を喫明し、低下する  
再び吸射を中絶し、この繰り返しにより内射が噴  
出から間欠射するものがある。

00031ところが、この種の噴射針では、圧力室内  
王力の上昇にともない直ちに弁を開き、噴射にともな

星の光を閉じることから、ミササギの効果を期待するに十分な明確な間欠照射を得ることができなかつ

【0004】このため、従来のバリエーションシステムでは、たとえ図10に示すように、エプソール器

このとき、システム2から噴出するエアゾール器1内の内  
部をシステム2に吸引し、押し下けてシステム2を押し込

該圧力室a内の第1の弁4を第1の付勢部材5を圧しながら図中左方向に揺動し、その第1の弁4の揺動

ともに、該井4内に、風抗シフトを介して摩擦を持

0005】そして、第2の付勢部材8の付勢力が抵抗  
力6の弾力力を越えたとき、第2の弁7を戻して第

の弁4と2の間を開き、その間を通して圧力室2内の内  
部を第1の弁4の噴射口4aから噴射していた。その

て、第2の井戸を摩滅を持って貫入する。そして、圧

またa内の圧力が上昇すると、再度第2の井7を開いて実験を噴射し、低下すると、再び噴射を中断し、この

0006】これにより、第2のホ7の関キを遅らせ、

「サー」効果を期待できるに十分な明確な開文照射を  
ることができるようになっている。

11001  
【証明が解決しようとする課題】しかしながら、このよ

使用時、抵抗リングを介して第1の弁4に対する第2の弁7の吸入と排出を繰り返すことから、第1の弁

を得ることができなくなる

【待望の家の転座】 エアゾールの入玉に取り付けてその  
 玉とともにはし下げ可能に設ける組本体と、

「ム」とともに押し下げる可能に設ける組本体と、  
の組本体内に自動自在に設け、前記入サムから噴出さ  
る前記エプソール部の内容物が入る圧力室を区画する

の第1の弁を貫通し、外嚔を噴射口に向けるとともに、

の往復管に取り付けて前記圧力室内に設け、前記第1弁の横動にとらないう前記往復管とともに移動するとき

同時にその住居管内に別荘を別荘を建設した場合は、  
 流通を遮断する第2の弁と、  
 配入システムから抽出される前記エアゾード器の内部側に

り前記圧力室内の圧力が上昇したとき、付勢力に抗し前記第1の弁を移動してその第1の弁とともに前記第

の弁を移動し、前記通水路に対する弁を開き、水を排出し、前記圧力室と前記住居管内とを連通可能に、前記第1弁を付勢して前記第2の弁を前記通水路に押し当て、

記圧力室と隔壁を嵌管内との連通を遮断する付勢部材

講求項2】前記第1の井と前記往復管との間に弾性材料を介在し、前記材料は、前記往復管の振動を減衰させる。

【請求項3】 エアゾール器のノズルに取り付けてその噴射部を調整する噴射調整部を有する噴射調整装置。

システムともに見出し下付可能に設計する組本体と、

1の井と、  
の第1の井の貫通孔内に絞機を持って貫入して前記圧

管内に設ける第2の井と、  
第1の井を付勢してこの第2の井に押し当て、断記

配ステムから噴出される前記エアゾール器の内容物特に前記圧力室内の圧力が上昇し、前記付勢部に抗し

前記第1の井を移動してその第1の井とともに前記第2の井を所定量以上移動するとき、その第2の井に掛け

備えてなる、バスマレーシ<sup>ニ</sup>シ電射館。

【請求項4】前記第1部材を一体成形で前記第1本体と一体につくつてなる、請求項3に記載のハイブリッド型

【1000】  
【1000】  
【1000】

洗明の試す技術分野】この洗明は、エアノール器の  
 手元に取り付け、たとえば眉毛や歯牙保護などの目的

使用するソフトウェア・ツール群の範囲を限定する、詳しくは、押し下げてメニューを押し込んだとき、メニューから噴

[illegible]

とすから、部品点数が多くなり、コスト高となる

【0008】そこで、請求項1および2に記載の発明  
 上述したようなバイプレーシブ噴射銃において、  
 副銃性を備え、明確な副銃を有するコイルが、

【6000】  
 とを目的とする。  
 るとともに、薬品点数を削減してコストダウンを図るこ  
 うにすることを目的とする。請求項3および4に記載の  
 明細書、開示動作を受動的に行うことができるようにす

次の発明は、パワレシーブ噴射装置において、たとえ以下図1ないし図5を用いて説明する実施の形態のとおり、エアクレスタのエアミックスに取付けずとも、エアミックス内に押し下げ可能に設ける創本体15と、その創本体15内に送動自在に設け、前記エアミックス

[illegible][illegible]

主復舊20内の通達を遂行する付勢部材19と、を備

【0010】そして、この請求項1に記載の発明では、鉛本体15を押し下げてスラム1を押し込め、エアバルブ10内の内容物を減圧スラム1から噴出して鉛本体15の圧力室A内に入れ、その圧力室A内にして鉛本体15の圧力の上昇にともない付着部材19に施して第1の非

その1の井17とともに仕置管20を介して第2の井22に移動し、その第2の井22を所定量以上移動するとき、組本体15に対する該第2の井22の押し当てを解除して圧力室Aと仕置管20内とを連通し、圧力室

【0011】その後、噴射にともない圧力室内の圧力が低下すると、付勢部材19の付勢力で第1の弁17および第2の弁22を戻して第2の弁22を閉本体15に

[illegible]

5dを形成しても、

15) 6に連結して第1の弁37を自動自在に設け、鉛本体15)内に、前記27の組合部37aに連通する圧力室A

区画する。ピストン36には、中心穴36aの先に2

00431 せて、E2ト>36の内部部3602

設計、その付帯部材3.9でE入ト>3.6とともに第1

1356の人口に雇入により取り付けてなる。

【0044】一方、第1の井37には、外周部37aを設け、中心に、直線溝37cを有する貫通孔37

を設ける。そして、外向き弾道部37aを横穴35bの開口に押し当て、貫通孔37d内に、圧力室A内に設

ること、これの第2の井40の先端を摩擦を保持して、

【0045】第2の非40には、先端の2つの内周溝に

0aを形成し、基端に段部40bを設けて係止部材3

、ヒメトノ36とともに第1の井37を内向きに付勢

cを横穴3.5bの奥に押し当て、貫通孔3.7d孔縁を

「A内を慎重に保持してなる。」

00461として、使用時、エプソール線10を手で  
つて喉対口36bを患部に向け、接触距離35eに接

図47 知本体35を押し下げ、スプindelをスプindel 10内に押し込む。すると、スプindel 10内の

溶着が速く、 $\gamma$ -Al<sub>2</sub>O<sub>3</sub>から噴出して鋼本体35%の圧力室  
内に入り、その圧力室45%の圧力を上昇させる。

0047】その庄の上部にともない、付録資料39

する。裏通孔37d内に第2の弁41の先端を抵接し

井37の移動とともに第2の井40も移動する。

00481として、やがて第2の井40が所定量移動  
ると、図7に示すように段部40が保止部35dに

たり、さらなる移動にともない第2の井40に停止部350を掛け止めし、第2の井を摩擦に抗して貫通孔

7dを引出す。これにより、図8に示すように、

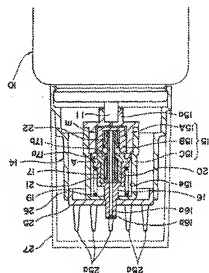
7dを開き、図中矢示するとおり圧力室A内の内容物

内に入れ、その中心穴36aを通して噴出口36bか

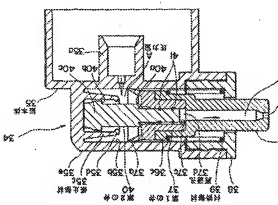
0049】その後、噴射にともない圧力室A内の圧力

風下り82.5、月勢増付3.9の付勢で第1のサマソニとして図9に示すように第2のサマソニの郵送部40.0を

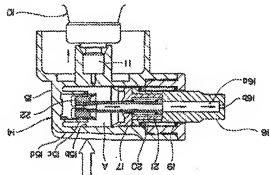




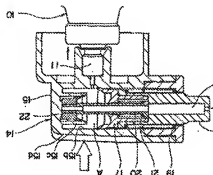
【図5】



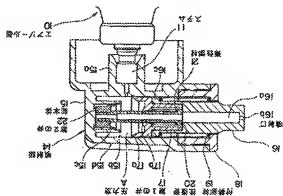
【図6】



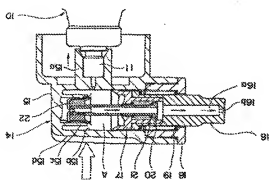
【図3】



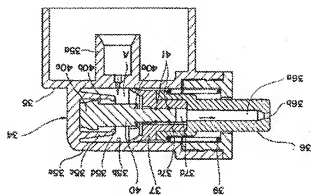
【図4】



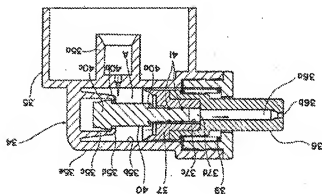
【図1】



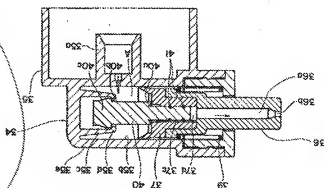
【図2】



【图9】

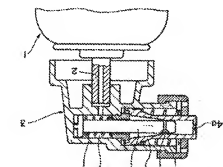


【图8】



【图7】

(8)



【图10】

特許第11-342202号

103  
PC for the  
rod/cylinder  
spring constant

103  
PC for the  
rod/cylinder  
spring constant

# PATENT ABSTRACTS OF JAPAN

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(21)Application number : 10-198186  
(72)Applicant : MITANI VALVE:KK  
(72)Inventor : SUGANO HIROSHI

## (54) VIBRATION SPRAY PUSH BUTTON

(57)Abstract:

PROBLEM TO BE SOLVED: To improve durability and to obtain clear out intermittent spray.

SOLUTION: At use, a push button body 15 is pressed down by hooking a finger on a finger-hook section 15d to press stem 11. A substance within an aerosol container 10 is sprayed out of the stem 11

to enter into a pressure chamber A of the push button body 15. Corresponding with a pressure increase within the pressure chamber

A, a first valve 17 is slid to a pressing member 19 to increase a volume within the pressure chamber A and to move a second valve

212 through a reciprocating pipe 20 together with the first valve 17. When the second valve 22 is moved over predetermined volume, a

pushing contact of the second valve 22 to the button main body 15 is released to allow the pressure chamber A to communicate with an

interior of the reciprocating pipe 20 and to spray the substance within the pressure chamber A through the reciprocating pipe 20 from a spray outlet 16b.

## LEGAL STATUS

[Date of request for examination]

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examiner's decision of rejection or application

converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

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rejection]

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## CLAIMS

[Claim(s)]

[Claim 1] The main body of button which attaches in the stem of an aerosol machine and is prepared possible [depression ] with the stem, The 1st valve which divides the pressure room containing the contents of said aerosol machine which prepares free [ sliding ] in the main body of button, and blows off from said stem, Both-way tubing which puts an inner edge into said pressure interior of a room while penetrating the 1st valve and turning an outer edge to an injection tip, The 2nd valve which opens and closes, and opens said pressure room for free passage in the both-way tubing, or intercepts the free passage when attaching in the both-way tubing, preparing in said pressure interior of a room and moving with said both-way tubing with sliding of said 1st valve, When the pressure of said pressure interior of a room rises by the contents of said aerosol machine which blows off from said stem, Resist the energization force, slide on said 1st valve, and said 2nd valve is moved with the 1st valve. Vibration \*\*\*\*\* which comes to have the energization member which cancels the push reliance to said main body of button, energizes said 1st valve possible [ said free passage of a pressure room and the inside of said both-way tubing ], presses said 2nd valve against said main body of button, and intercepts said free passage of a pressure room and the inside of said both-way tubing.

[Claim 2] Vibration \*\*\*\*\* according to claim 1 which comes to intervene in an elastic member between said 1st valve and said both-way tubing.

[Claim 3] The main body of button which attaches in the stem of an aerosol machine and is prepared possible [ depression ] with the stem, The 1st valve which divides the pressure room containing the contents of said aerosol machine which prepares free [ sliding ] in the main body of button, and blows off from said stem, The 2nd valve which intrudes with friction in the through tube of the 1st valve, and is prepared in said pressure interior of a room, The energization member which energizes said 1st valve, presses against this 2nd valve, and closes said through tube, When the pressure of said pressure interior of a room rises by the contents of said aerosol machine which blows off from said stem, said energization member is resisted, it slides on said 1st valve and said 2nd valve is moved more than the specified quantity with the 1st valve, Vibration \*\*\*\*\* which comes to have the stop member which hangs and stops to the 2nd valve, separates this 2nd valve from said 1st valve, and opens said through tube.

[Claim 4] Vibration \*\*\*\*\* according to claim 3 which really comes to build said stop member to said main body of button and one with shaping.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to vibration \*\*\*\*\* which attaches in the stem of an aerosol machine, for example, is used for the purpose, such as hair fostering and circulation promotion. When it depresses and a stem is pushed in, detail, the contents in the aerosol machine which blows off from a stem are intermittently injected from an injection tip, and while adhering the contents to the affected part, it is related with vibration \*\*\*\*\* which massages the affected part by the contents injected intermittently.

[0002]

[Description of the Prior Art] In this kind of vibration \*\*\*\*\* , conventionally, When it depresses and a stem is pushed in, the contents in the aerosol machine which blows off from a stem are put into the pressure interior of a room of a main body of button. If a valve is closed with the fall of the pressure by the injection, injection is interrupted and the pressure of the pressure interior of a room rises after that while opening the valve of this pressure interior of a room with the rise of pressure and injection from an injection tip. Contents are injected again, when it falls, injection is interrupted again and there are some which carry out intermittent injection of the contents from an injection tip by this

[0003]

However, in this kind of \*\*\*\*\* , since the valve was immediately opened with the rise of the pressure of the pressure interior of a room and the valve was immediately closed with injection, sufficient clear intermittent injection for the massage effectiveness to be appreciable was not able to be acquired.

[0004]

For this reason, in the conventional vibration \*\*\*\*\* For example, as shown in drawing 10 , when it attaches in the stem 2 of the aerosol machine 1 , it depresses and a stem 2 is pushed in. The contents in the aerosol machine 1 spouted from a stem 2 are put in the pressure room of a main body of button 3 , and it slides leftward in drawing, compressing the 1st energization member 5 for the 1st valve 4 in this pressure room a with the rise of a pressure. With sliding of the 1st valve 4 There are some which move the 2nd valve 7 of the shape of a needle which intrudes with friction in this valve 4 through the resistance ring 6 while compressing the 2nd energization member 8.

[0005]

And when the energization force of the 2nd energization member 8 exceeded the frictional force of the resistance ring 6, the 2nd valve 7 was returned, between the 1st valve 4 was opened, and the contents in the pressure room a were injected from injection tip 4a of the 1st valve 4 through the meantime. Then, it slides on the 1st valve 4 in the direction of drawing Nakamigi with the fall of the pressure by the injection, and the 2nd valve 7 is again intruded with friction in this valve 4 through the resistance ring 6. And when the pressure in the pressure room a rose, the 2nd valve 7 was opened again, contents were injected, when it fell, injection was interrupted again and intermittent injection of the contents was carried out from injection tip 4a by this repeat.

[0006]

Thereby, the aperture of the 2nd valve 7 is delayed and there is a thing which enabled it to acquire sufficient clear intermittent injection for the massage effectiveness to be expectable.

[0007]

[Problem(s) to be Solved by the Invention] However, to such vibration \*\*\*\*\* From repeating penetrating and the extraction of the 2nd valve 7 to the 1st valve 4 through the resistance ring 6 at the time of use \*\* produces wear and it becomes impossible to acquire clear intermittent injection soon between the 1st valve 4 and the resistance link 6, since the 2nd valve 7 is opened by the energization force of the 2nd energization member 8 \*\* which cannot perform valve-opening actuation easily -- since the 2nd energization member 8 was needed with the 1st energization member 5, components mark increases and technical problems, such as becoming cost quantity, occurred.

[0008]

Then, in vibration \*\*\*\*\* which was mentioned above, invention given in claims 1 and 2 improves endurance, and aims at enabling it to acquire clear intermittent injection. While invention of a publication enables it to perform

valve-opening actuation to claims 3 and 4 stably, it aims at reducing components mark and aiming at a cost cut.

[0009]

[Means for Solving the Problem] Therefore, invention according to claim 1 is set to vibration \*\*\*\*\*. For example, the valve 17 with the stem 11 as the gist of the operation explained using the following drawing 1 thru/or drawing 5. The 1st valve 17 which divides the pressure room A containing the contents of said aerosol machine 10 which prepares free [sliding] in the main body of button 15, and blows off from said stem 11. The both-way tubing 20 which puts in an inner edge in said pressure room A while penetrating the 1st valve 17 and turning an outer edge to injection-tub 16b, and the 2nd valve 22 which opens and closes, and opens said pressure room A for free passage in the both-way tubing 20, or intercepts the free passages when attaching in the both-way tubing 20, preparing in said pressure room A and moving with said both-way tubing 20 with sliding of said 1st valve 17. When the pressure in said pressure room A rises by the contents of said aerosol machine 10 which blows off from said stem 11. Resist the energization force, slide on said 1st valve 17, and said 2nd valve 22 is moved with the 1st valve 17. The push reliance to said main body of button 15 is canceled. Possible [said free passage of the pressure room A and the inside of said both-way tubing 20] Said 1st valve 17 is energized, said 2nd valve 22 is pressed against said main body of button 15, and it is characterized by the thing it comes to have the energization member 19 which intercepts said free passage of the pressure room A and the inside of said both-way tubing 20.

[0010] And in this invention according to claim 1, at the time of use, depress a main body of button 15 and a stem 11 is pushed in. Blow off from this stem 11 and the contents in the aerosol machine 10 are put in the pressure room A of a main body of button 15. While resisting the energization member 19 with the rise of the pressure in the pressure room A, sliding on the 1st valve 17 and increasing the volume in the pressure room A. When moving the 2nd valve 22 both through the both-way tubing 20 with the 1st valve 17 and moving the 2nd valve 22 more than the specified quantity. The push reliance of this 2nd valve 22 to a main body of button 15 is canceled, the pressure room A and the inside of the both-way tubing 20 are opened for free passage, and the contents in the pressure room A are injected from injection-tub 16b through the inside of the both-way tubing 20.

[0011] Then, if the pressure in the pressure room A declines with injection, the 1st valve 17 and 2nd valve 22 will be returned by the energization force of the energization member 19, the 2nd valve 22 will be pressed against a main body of button 15, the free passage of the pressure room A and the inside of the both-way tubing 20 will be intercepted, and injection of contents will be interrupted.

[0012] And if the pressure in the pressure room A rises, contents are injected again, if it falls, injection will be interrupted again and intermittent injection of the contents in the pressure room A will be carried out from injection-tub 16b by this repeat.

[0013] Invention according to claim 2 is characterized by the thing it comes to intervene in an elastic member 21 according to claim 1 as the gist of the operation explained using the following drawing 1 thru/or drawing 5.

[0014] And in this invention according to claim 2, when the 1st valve 17 slides with the rise of the pressure in the pressure room A, an elastic member 21 is compressed, the 2nd valve 22 is moved behind time through the both-way tubing 20, the push reliance of this 2nd valve 22 to a main body of button 15 is canceled soon, and the pressure room A

[0015] The passage of the gist of the operation which explains invention according to claim 3 in vibration \*\*\*\*\* and the inside of the both-way tubing 20 are opened for free passage behind time.

using the following drawing 6 thru/or drawing 9. The main body of button 35 which attaches in the stem 11 of the aerosol machine 10, and is prepared possible [depression] with the stem 11. The 1st valve 37 which divides the pressure room A containing the contents of said aerosol machine 10 which prepares free [sliding] in the main body of button 35, and blows off from said stem 11. The 2nd valve 40 which intrudes with friction in 37d of through tubes of the 1st valve 37, and is prepared in said pressure room A. The energization member 39 which energizes said 1st valve 37, presses against this 2nd valve 40, and closes 37d of said through tubes. The pressure in said pressure room A rises by the contents of said aerosol machine 10 which blows off from said stem 11. When resisting said energization member 39, sliding on said 1st valve 37 and moving said 2nd valve 40 more than the specified quantity with the 1st valve 37, it hangs and stops to the 2nd valve 40, this 2nd valve 40 is separated from said 1st valve 37, and it is characterized by the thing it comes to have stop member 35c which opens 37d of said through tubes.

[0016] And in this invention according to claim 3, at the time of use, depress a main body of button 35 and a stem 11 is pushed in. Blow off from this stem 11 and the contents in the aerosol machine 10 are put in the pressure room A of a main body of button 35. While resisting the energization member 39 with the rise of the pressure in the pressure room A, sliding on the 1st valve 37 and increasing the volume in the pressure room A, when moving the 2nd valve 40 more

than the specified quantity with the 1st valve 37, stop member 35c is hung and stopped to this 2nd valve 40, friction is resisted, the 2nd valve 40 is separated from the 1st valve 37, 37d of through tubes is opened, and the contents in the pressure room A are injected from injection-tip 36b through 37d of the through tube.

[0017] Then, if the pressure in the pressure room A declines with injection, the 1st valve 37 will be returned by the energization force of the energization member 19, the 2nd valve 40 will be again intruded in 37d of through tubes, this 2nd valve 40 will close 37d of through tubes, and injection of contents will be interrupted.

[0018] And if the pressure in the pressure room A rises, contents are injected again, if it falls, injection will be interrupted again and intermittent injection of the contents in the pressure room A will be carried out from injection-tip 36b by this repeat.

[0019] Invention according to claim 4 is characterized by what it really comes to build said stop member 35c to said main body of button 35 and one with shaping for in vibration \*\*\*\*\* according to claim 3 as the gist of the operation explained using the following drawing 6 thru/or drawing 9.

[0020] And in this invention according to claim 4, when resisting friction and pulling out the 2nd valve 40 from 37d of through tubes, stop member 35c built to a main body of button 35 and one is hung and stopped to the 2nd valve 40 with one shaping.

[0021]

[Embodiment of the Invention] Hereafter, it explains per gestalt of implementation of this invention, referring to a stem of an aerosol machine 10 in drawing 1. \*\*\*\*\* according to claim 1 in the condition of having attached in the contents to contain the liquid which has for example, the hat-fostering effectiveness, a circulation facilitatory effect, etc. in this aerosol machine 10. Vibration \*\*\*\*\* 14 by invention according to claim 1 is attached in the stem 11 of the aerosol machine 10.

[0023] The main body of button 15 really built with shaping using the resin ingredient is formed in \*\*\*\*\* 14, while preparing downward stem fitting section 15a which fits a stem 11 into a core in a main body of button 15, cave hole 15b of the cross-section round shape opened to one side of the direction of a path is prepared in the upper part. And it comes to form tubed projected part 15c in the inner part of cave hole 15b towards the direction to open.

[0024] Into such cave hole 15b, it connects with a piston 16, the 1st valve 17 is formed free [sliding], and the pressure room A which is open for free passages in a main body of button 15 at said stem fitting section 15a is divided. It comes to prepare injection-tip 16b of this \*\*\*\*\* 14 in a piston 16 at the point of main hole 16a. And the coil-spring-like energization member 19 is formed between inner edge flange 16c of a piston 16, and the fixed bush 18, and the 1st valve 17 is energized to the inner sense with a piston 16 by the energization member 19. It comes to attach the fixed bush 18 in the inlet port of cave hole 15b by press fit.

[0025] On the other hand, the both-way tubing 20 is penetrated and formed in a core at the 1st valve 17. The both-way tubing 20 puts in an inner edge in the pressure room A while turning an outer edge to injection-tip 16b. And the elastic member 21 of the shape of a coil spring prepared in an outer edge periphery is intervened between the 1st valve 17 and the both-way tubing 20, the outer edge of the both-way tubing 20 is always applied to a piston 16, and the inside of the both-way tubing 20 is opened for free passage to injection-tip 16b through main hole 16a.

[0026] In addition, outward elastic section 17a and inside elastic section 17b are prepared in the 1st valve 17, and outward elastic section 17a -- the inner circumference of cave hole 15b -- pressing -- inner sense elastic section 17b -- the periphery of the both-way tubing 20 -- pressing -- the inside of the pressure room A -- liquid -- it comes to hold

[0027] Now, the 2nd valve 22 is attached in the inner edge of the both-way tubing 20 in the pressure room A, and it contains in said tubed projected part 15c. And the 2nd valve 22 is pressed against a main body of button 15 by the energization force of said energization member 19, and it always comes to intercept the free passage of the pressure room A and the inside of the both-way tubing 20.

[0028] And at the time of use, it has the aerosol machine 10 by hand, and injection-tip 16b is turned to the affected part, a finger is hung on 15d of fingerplate sections, a main body of button 15 is depressed, and a stem 11 is pushed in the aerosol machine 10. Then, the contents in the aerosol machine 10 blow off from this stem 11, enter in the pressure room A with the rise of the pressure, the energization member 19 is resisted, it slides on the 1st valve 17, and the room A of a main body of button 15, and go up the pressure in the pressure room A.

[0029] With the rise of the pressure, the energization member 19 is resisted, it slides on the 1st valve 17, and the volume in the pressure room A is increased. Although an elastic member 21 is compressed with sliding of that 1st valve 17 in the beginning at this time, when the elastic force of that elastic member 21 became large, the both-way tubing 20 is moved with the 1st valve 17, the 2nd valve 22 also moves [both] and specified quantity migration of that 2nd valve

22 is carried out soon, the push reliance of this 2nd valve 22 to a main body of button 15 is canceled.

[0030] this shows drawing 22 -- as -- between a main body of button 15 and the 2nd valve 22 -- a clearance -- building -- the clearance -- letting it pass -- the pressure room A and the inside of the both-way tubing 20 -- open for free passage - drawing 2 Nakaya -- as -- the contents in the pressure room A are put in in the both-way tubing 20, and it injects from injection-tip 169 to the affected part through main hole 16a of a piston 16.

[0031] Then, at first, if the pressure in the pressure room A declines with injection, as shown in drawing 3, the both-way tubing 20 will be returned and an outer edge will be pressed against a piston 16 by the elastic force of an elastic member 21. Then, if a pressure declines further, as shown in drawing 4, the 1st valve 17 and 2nd valve 22 are returned, the 2nd valve 22 is again put in in the both-way tubing 20, it will press against a main body of button 15, the free passage of the pressure room A and the inside of the both-way tubing 20 will be intercepted, and injection of contents will be interrupted for the energization force of the energization member 19.

[0032] And when contents are injected again and it falls, as it is shown in drawing 2 and drawing 3, and it is shown in drawing 4, injection is interrupted [ when the pressure in the pressure room A rises, ] again, and intermittent injection to the contents in the pressure room A is carried out from injection-tip 16b by this repeat. And while adhering contents of the affected part, the affected part is massaged by the contents which carry out intermittent injection.

[0033] Thereby, in vibration \*\*\*\*\* 14 shown in this drawing 1 thru/or drawing 4, the 2nd valve 22 is not immediately opened with the rise of the pressure in the pressure room A, but since it opens after carrying out specified quantity migration, the downtime of injection can be secured certainly and sufficient clear intermittent injection for the message effectiveness to be expectable can be acquired.

[0034] Moreover, since a resistance ring is not used, the part greatly worn out can be lost and endurance can be improved.

[0035] By the way, in vibration \*\*\*\*\* 14 shown in drawing 1 thru/or drawing 4, a main body of button 15 is really built with shaping using a resin ingredient, cave hole 15b is prepared in it, piston 16 and the 1st valve 17, and the 2nd energization member 19, both-way tubing 20, elastic member 21 and valve 22 are attached in the cave hole 15b, and the contents in the aerosol machine 10 were sideways injected from injection-tip 16b.

[0036] As shown, for example in drawing 5, however, a main body of button 15 put in bush 15B in bottom case 15A, and upper case 15C is put and constituted on it. Dugout 15c is prepared in the interior, piston 16 and the 1st valve 17, and the 2nd energization member 19, both-way tubing 20, elastic member 21 and valve 22 are attached in the cave hole 15b, and made for the contents of the aerosol machine 10 which blew off from the stem 11 to enter in the pressure room A thru/or drawing 4, and the 2nd valve 22 is put in in bush 15B. Slot m is formed outside at this bush 15B, and it is through that slot m. In addition, in addition to this, it comes to use the sign used for the part to which \*\*\*\*\* 14 shown in drawing 1 thru/or drawing 4 corresponds in this drawing 5 as it is.

[0038] In drawing 5, the newly attached sign 25 is Mt. Tsunagi which a piston 16 penetrates a core, and is attached and established in a main body of button 15. Much projected part 25a is surrounded by the surroundings of a main body of button 15 or Mt. Tsunagi 25. A sign 26 is covering of the shape of a cylinder which covers the surroundings of a main body of button 15 or Mt. Tsunagi 25, and attaches and prepares the lower part in the aerosol machine 10. A sign 27 is a cap which puts on [0039] and is attached in covering 26 at the time of un-using it.

[0039] And while cap 27 is removed and have the aerosol machine 10 in reverse, when using it, pressing projected part 25a of Mt. Tsunagi 25 against a head, depressing a main body of button 15, pushing in a stem 11, carrying out intermittent injection of the contents in the aerosol machine 10 from injection-tip 16b like the case where it is shown in drawing 1 thru/or drawing 4 henceforth and adhering contents to a head, a head is massaged by the contents which carry out intermittent injection.

[0040] Now, the longitudinal section of vibration \*\*\*\*\* according to claim 3 is shown in drawing 5 below. The main body of button 35 really built with shaping using the resin ingredient is formed in illustration \*\*\*\*\* 34. While preparing downward stem fitting section 35a which fits the stem of an aerosol machine into a core in a main body of button 35, cave hole 35b of the cross-section round shape opened to one side of the direction of a path is prepared in the upper part.

[0041] And in this example of illustration, stop member 35c which projects in tubed towards the direction to open is prepared in the inner part of cave hole 35b at one, it comes to form 35d of stop sections at the tip of stop member 35c. [0042] Into such cave hole 35b, it connects with a piston 36, the 1st valve 37 is formed free [ sliding ], and the pressure room A which is open for free passage in a main body of button 35 at said stem fitting section 35a is divided. It comes to prepare injection-tip 36b of this \*\*\*\*\* 34 in a piston 36 at the point of main hole 36a.

[0043] And the coil-spring-like energization member 39 is formed between inner end flange 35c of a piston 36, and the fixed bush 38, and the 1st valve 37 is energized to the inner sense with a piston 36 by the energization member 39. It comes to attach the fixed bush 38 in the inlet port of cave hole 35b by press fit.

[0044] On the other hand, outward elastic section 37a is prepared in the 1st valve 37, and 37d of through tubes which have straight-line slot 37c at the core is prepared in it. And outward elastic section 37a is pressed against the inner circumference of cave hole 35b, and it comes to intrude in 37d of through tubes with friction in the tip of the 2nd valve 40 of the shape of a needle established in the pressure room A.

[0045] It inserts in two peripheral slots on the tip respectively, the resistance ring 41 is formed in the 2nd valve 40, seal section 40a is formed in it on the way, and it comes to form in it diameter expansion section 40c which prepares step 40b in an end face, and enters in stop member 35c, and the energization force of the energization member 39 which energizes the 1st valve 37 to the inner sense with a piston 36 -- diameter expansion section 40c of the 2nd valve 40 -- the back of cave hole 35b -- pressing -- 37d hole edge of through tubes -- seal section 40a -- pushing -- 37d of through tubes -- closing -- the inside of the pressure room A -- liquid -- it comes to hold densely

[0046] And at the time of use, it has the aerosol machine 10 by hand, and injection-tip 36b is turned to the affected part, aerosol machine 10. Then, the contents in the aerosol machine 10 blow off from this stem 11, enter in the pressure room A, and at the time of use, it has the aerosol machine 10 by hand, and injection-tip 36b is turned to the affected part, a finger is hung on fingerplate section 35c, a main body of button 35 is depressed, and a stem 11 is pushed in the aerosol machine 10. Then, the contents in the aerosol machine 10 blow off from this stem 11, enter in the pressure room A.

[0047] With the rise of the pressure, the energization member 39 is resisted, it slides on the 1st valve 37, and the volume in the pressure room A is increased. Since the tip of the 2nd valve 40 is divided with friction through the resistance ring 41 in 37d of through tubes, the 2nd valve 40 also moves with migration of the 1st valve 37.

[0048] And if the 2nd valve 40 carries out specified quantity migration soon, as shown in drawing 7, step 40b hangs friction will be resisted and the 2nd valve will be pulled out from 37d of through tubes, this shows drawing 8 -- as -- seal section 40a -- from the hole edge of 37d of through tubes -- detaching -- 37d of through tubes -- opening -- drawing Nakaya A -- -- -- -- a passage -- the inside of the pressure room A -- contents are put in a piston 36 through straight-line slot of 37d of the through tube 37c, and it injects from injection-tip 36b through the main hole 36a.

[0049] Then, if the pressure in the pressure room A declines with injection, as the 1st valve 37 is returned by the energization force of the energization member 39 and it is shown in drawing 9, diameter expansion section 40c of the 2nd valve 40 is pressed in the inner part of cave hole 35b, the 2nd valve 40 is again intruded in 37d of through tubes, 37d hole edge of through tubes will be forced on seal section 40a, 37d of through tubes will be closed, and injection of contents will be interrupted.

[0050] And if the pressure in the pressure room A rises again, contents are injected again, if it falls, injection will be interpreted again and intermittent injection of the contents in the pressure room A will be carried out from injection-tip 36b by this repeat. And while adhering contents to the affected part, the affected part is massaged by the contents which carry out intermittent injection.

[0051] Therefore, in vibration \*\*\*\*\* 34 shown in this drawing 9 thru/or drawing 9, since stop member 35c is hung on the 2nd valve 40 with the rise of the pressure in the pressure room A, a stop and the push reliance of seal section 40a to 37d hole edge of through tubes are canceled and it opens, valve-opening actuation can be performed stably, without using an elastic member. Moreover, components mark can be reduced by the ability using an energization member only as the energization member 39, and a cost cut can be aimed at.

[0052] [Effect of the Invention] Therefore, according to claim 1, the 2nd valve is not immediately opened with the rise of the pressure of the pressure interior of a room, but since it opens after carrying out specified quantity migration, the downtime of injection can be secured certainly and sufficient clear intermittent injection for the massaged effectiveness to be appreciable can be acquired. Moreover, since a resistance ring is not used, the part greatly worn out can be lost and endurance can be improved.

[0053] According to invention according to claim 2, an elastic member is compressed with sliding of the 1st valve, both-way tubing is moved behind time, and since a pressure room and the inside of both-way tubing are delayed and it is open for free passage in addition to the above-mentioned effectiveness by moving the 2nd valve and canceling the push reliance of this 2nd valve to a main body of button soon with the both-way tubing, intermittent injection can much more be ensured.

[0054] According to invention according to claim 3, since a stop member is hung on the 2nd valve with the rise of the pressure of the pressure interior of a room, the push reliance of the 2nd valve to a stop and the 1st valve is canceled and it opens, valve-opening actuation can be performed stably, without using an energization member. Moreover, the

energization member used on the whole can be lessened, components mark can be reduced, and a cost cut can be aimed at.  
[0055] According to invention according to claim 4, since a stop member is really built to a main body of button and one with shaping, in addition to effectiveness given in above-mentioned claim 3, components mark can be reduced and a cost cut can be aimed at.

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[Trans]ation done.]

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## TECHNICAL FIELD

[Field of the Invention] This invention relates to vibration \*\*\*\*\* which attaches in the stem of an aerosol machine, for example, is used for the purpose, such as hair fostering and circulation promotion. When it depresses and a stem is pushed in in detail, the contents in the aerosol machine which blows off from a stem are intermittently injected from an injection up, and while adhering the contents to the affected part, it is related with vibration \*\*\*\*\* which massages the affected part by the contents injected intermittently.

[Translation done.]

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## EFFECT OF THE INVENTION

[Effect of the Invention] Therefore, according to invention according to claim 1, the 2nd valve is not immediately opened with the rise of the pressure of the pressure interior of a room, but since it opens after carrying out specified quantity migration, the downtime of injection can be secured certainly and sufficient clear intermittent injection for the massage effectiveness to be expectable can be acquired. Moreover, since a resistance ring is not used, the part greatly worn out can be lost and endurance can be improved.

[0053] According to invention according to claim 2, an elastic member is compressed with sliding of the 1st valve, both-way tubing is moved behind time, and since a pressure room and the inside of both-way tubing are delayed and it is open for free passage in addition to the above-mentioned effectiveness by moving the 2nd valve and canceling the push reliance of this 2nd valve to a main body of button soon with the both-way tubing, intermittent injection can much more be ensured.

[0054] According to invention according to claim 3, since a stop member is hung on the 2nd valve with the rise of the pressure of the pressure interior of a room, the push reliance of the 2nd valve to a stop and the 1st valve is canceled and it opens, valve-opening actuation can be performed stably, without using an energization member. Moreover, the energization member used on the whole can be lessened, components mark can be reduced, and a cost cut can be aimed at.

[0055] According to invention according to claim 4, since a stop member is really built to a main body of button and one with shaping, in addition to effectiveness given in above-mentioned claim 3, components mark can be reduced and a cost cut can be aimed at.

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## MEANS

[Means for Solving the Problem] Therefore, invention according to claim 1 is set to vibration \*\*\*\*\*. For example, the main body of button 15 which attaches in the stem 11 of the aerosol machine 10, and is prepared possible [depression] with the stem 11 as the gist of the operation explained using the following drawing 1, thru/or drawing 5. The 1st valve 17 which divides the pressure room A containing the contents of said aerosol machine 10 which prepares free [sliding] in the main body of button 15, and blows off from said stem 11. The both-way tubing 20 which puts in an inner edge in said pressure room A while penetrating the 1st valve 17 and turning an outer edge to injection-tip 16b, with said both-way tubing 20 with sliding of said 1st valve 17. When the pressure in said pressure room A rises by the contents of said aerosol machine 10 which blows off from said stem 11. Resist the energization force, slide on said 1st valve 17, and said 2nd valve 22 is moved with the 1st valve 17. The push reliance to said main body of button 15 is canceled. Possible [said free passage of the pressure room A and the inside of said both-way tubing 20] Said 1st valve 17 is energized, said 2nd valve 22 is pressed against said main body of button 15, and it is characterized by the thing it comes to have the energization member 19 which intercepts said free passage of the pressure room A and the inside of button 15, and in this invention according to claim 1, at the time of use, depress a main body of button 15 and a stem 11 is pushed in. Blow off from this stem 11 and the contents in the aerosol machine 10 are put in the pressure room A of a main body of button 15. While resisting the energization member 19 with the rise of the pressure in the pressure room A, sliding on the 1st valve 17 and increasing the volume in the pressure room A. When moving the 2nd valve 22 both thru/or the both-way tubing 20 with the 1st valve 17 and moving the 2nd valve 22 more than the specified quantity, The push reliance of this 2nd valve 22 to a main body of button 15 is canceled, the pressure room A and the inside of injection-tip 16b through the inside of the both-way tubing 20. [0011] Then, if the pressure in the pressure room A declines with injection, the 1st valve 17 and 2nd valve 22 will be returned by the energization force of the energization member 19, the 2nd valve 22 will be pressed against a main body of button 15, the free passage of the pressure room A and the inside of the both-way tubing 20 will be intercepted, and injection of contents will be interrupted.  
 [0012] And if the pressure in the pressure room A rises, contents are injected again, if it fails, injection will be interrupted again and intermittent injection of the contents in the pressure room A will be carried out from injection-tip 16b by this repeat.  
 [0013] Invention according to claim 2 is characterized by the thing it comes to intervene in an elastic member 21 between said 1st valve 17 and said both-way tubing 20 in vibration \*\*\*\*\* according to claim 1 as the gist of the operation explained using the following drawing 1 thru/or drawing 5.  
 [0014] And in this invention according to claim 2, when the 1st valve 17 slides with the rise of the pressure in the pressure room A, an elastic member 21 is compressed, the 2nd valve 22 is moved behind time thru/or the both-way tubing 20, the push reliance of this 2nd valve 22 to a main body of button 15 is canceled soon, and the pressure room A and the inside of the both-way tubing 20 are opened for free passage behind time.  
 [0015] The passage of the gist of the operation which explains invention according to claim 3 in vibration \*\*\*\*\* using the following drawing 6 thru/or drawing 9. The main body of button 35 which attaches in the stem 11 of the aerosol machine 10, and is prepared possible [depression] with the stem 11. The 1st valve 37 which divides the pressure room A containing the contents of said aerosol machine 10 which prepares free [sliding] in the main body of button 35, and blows off from said stem 11. The 2nd valve 40 which intrudes with friction in 37d of through tubes of

the 1st valve 37, and is prepared in said pressure room A. The energization member 39 which energizes said 1st valve 37, presses against this 2nd valve 40, and closes 37d of said through tube. The pressure in said pressure room A rises by the contents of said aerosol machine 10 which blows off from said stem 11. When resisting said energization member 39, sliding on said 1st valve 37 and moving said 2nd valve 40 more than the specified quantity with the 1st member 37, it hangs and stops to the 2nd valve 40, this 2nd valve 40 is separated from said 1st valve 37, and it is characterized by the thing it comes to have stop member 35c which opens 37d of said through tubes.

[0016] And in this invention according to claim 3, at the time of use, depress a main body of button 35 and a stem 11 is pushed in. Blow off from this stem 11 and the contents in the aerosol machine 10 are put in in the pressure room A of a main body of button 35. While resisting the energization member 39 with the rise of the pressure in the pressure room A, sliding on the 1st valve 37 and increasing the volume in the pressure room A, when moving the 2nd valve 40 more than the specified quantity with the 1st valve 37, 37d of through tubes is opened, and the contents in the pressure room A are injected from injection-tip 36b through 37d of the through tube.

[0017] Then, if the pressure in the pressure room A declines with injection, the 1st valve 37 will be returned by the energization force of the energization member 39, the 2nd valve 40 will be again included in 37d of through tubes, this 2nd valve 40 will close 37d of through tubes, and injection of contents will be interrupted.

[0018] And if the pressure in the pressure room A rises, contents are injected again, if it falls, injection will be interrupted again and intermittent injection of the contents in the pressure room A will be carried out from injection-tip 36b by this repeat.

[0019] Invention according to claim 4 is characterized by what it really comes to build said stop member 35c to said main body of button 35 and one with shaping for in vibration \*\*\*\*\* according to claim 3 as the gesture of the operation explained using the following drawing 6 thru/or drawing 9.

[0020] And in this invention according to claim 4, when resisting friction and pulling out the 2nd valve 40 from 37d of through tubes, stop member 35c built to a main body of button 35 and one is hung and stopped to the 2nd valve 40 with one shaping.

[0021] Embodiment of the invention [Hereafter, it explains per gesture of implementation of this invention, referring to a drawing. The longitudinal section of vibration \*\*\*\*\* according to claim 1 in the condition of having attached in the stem of an aerosol machine is shown in drawing 1.

[0022] What is shown with the sign 10 in drawing is the aerosol machine which projects a stem 11 upward. It comes as contents to contain the liquid which has for example, the hair-fostering effectiveness, a circulation facilitatory effect, etc. in this aerosol machine 10. Vibration \*\*\*\*\* 14 by invention according to claim 1 is attached in the stem 11 of the aerosol machine 10.

[0023] The main body of button 15 really built with shaping using the resin ingredient is formed in \*\*\*\*\* 14. While preparing downward stem fitting section 15a which fits a stem 11 into a core in a main body of button 15, cave hole 15b of the cross-section round shape opened on one side of the direction of a path is prepared in the upper part. And it comes to form tubed projected part 15c in the inner part of cave hole 15b towards the direction to open.

[0024] Into such cave hole 15b, it connects with a piston 16, the 1st valve 17 is formed free [sliding], and the pressure room A which is open for free passage in a main body of button 15 at said stem fitting section 15a is divided. It comes to prepare injection-tip 16b of this [sliding] 14 in a piston 16 at the point of main hole 16a. And the coil-spring-like energization member 19 is formed between inner edge flange 16c of a piston 16, and the fixed bush 18, and the 1st valve 17 is energized to the inner sense with a piston 16 by the energization member 19. It comes to attach the fixed bush 18 in the inlet port of cave hole 15b by press fit.

[0025] On the other hand, the both-way tubing 20 is penetrated and formed in a core at the 1st valve 17. The both-way tubing 20 puts in an inner edge in the pressure room A while turning an outer edge to injection-tip 16b. And the elastic member 21 of the shape of a coil spring prepared in an outer edge periphery is intervened between the 1st valve 17 and the both-way tubing 20, the outer edge of the both-way tubing 20 is always applied to a piston 16, and the inside of the both-way tubing 20 is opened for free passage to injection-tip 16b through main hole 16a.

[0026] In addition, outward elastic section 17a and inside sense elastic section 17b are prepared in the 1st valve 17, and outward elastic section 17a -- the inner circumference of cave hole 15b -- pressing -- the inside of the pressure room A -- liquid -- it comes to hold densely

[0027] Now, the 2nd valve 22 is attached in the inner edge of the both-way tubing 20 in the pressure room A, and it contains in said tubed projected part 15c. And the 2nd valve 22 is pressed against a main body of button 15 by the

energization force of said energization member 19, and it always comes to intercept the free passage of the pressure

room A and at the time of use, it has the aerosol machine 10 by hand, and injection-tip 16 is turned to the affected part,

room A and the inside of the both-way tubing 20.

[0028] And at the time of use, it has the aerosol machine 10 by hand, and injection-tip 16 is turned to the affected part,

aerosol machine 10. Then, the contents in the aerosol machine 10 flow off from this stem 11, enter in the pressure

[0029] With the rise of the pressure, the energization member 19 is resisted, it slides on the 1st valve 17, and the

volume in the pressure room A is increased. Although an elastic member 12 is compressed with sliding of that 1st valve

17 in the beginning at this time, when the elastic force of that elastic member 12 is comparatively large, the both-way tubing 20

is moved with the 1st valve 17, the 2nd valve 22 also moves [ and specified quantity migration of that 2nd valve

22 is carried out soon, the push reliance of this 2nd valve 22 to a main body of button 15 is canceled.

[0030] This shows drawing 2 -- as -- between a main body of button 15 and the 2nd valve 22 -- a clearance -- building --

the clearance -- letting it pass -- the pressure room A and the inside of the both-way tubing 20 -- open for free passage --

drawing 2 Nakaya -- as -- the contents in the pressure room A are put in the both-way tubing 20, and it

injects from injection-tip 16b to the affected part through main hole 16a of a piston 16.

[0031] Then, at first, if the pressure in the pressure room A declines with the injection, as shown in drawing 3, the both-

member 21. Then, if a pressure declines further, as shown in drawing 4, the 1st valve 17 and 2nd valve 22 are returned,

the 2nd valve 22 is again put in a tubed projected part 15c, it will press against a main body of button 15, the free

passages of the pressure room A and the inside of the both-way tubing 20 will be interrupted, and injection of contents

will be interrupted for the energization member 19.

[0032] And when contents are injected again and it falls, as it is shown in drawing 2 and drawing 3, and it is shown in

drawing 4, injection is interrupted [ when the pressure in the pressure room A rises,] again, and intermittent injection

of the contents in the pressure room A is carried out from injection-tip 16b by this repeat. And while adhering contents

to the affected part, the affected part is massaged by the contents which carry out intermittent injection.

[0033] Thereby, in vibration \*\*\*\*\* 14 shown in this drawing 1 thru/drawing 4, the 2nd valve 22 is not

immediately opened with the rise of the pressure in the pressure room A, but since it opens after carrying out specified

quantity migration, the downtime of injection can be secured certainly and sufficient clear intermittent injection for the

massage effectiveness to be expectable can be acquired.

[0034] Moreover, since a resistance ring is not used, the part greatly worn out can be lost and endurance can be

improved.

[0035] By the way, in vibration \*\*\*\*\* 14 shown in drawing 1 thru/drawing 4, a main body of button 15 is really

built with shaping using a resin ingretdien, cave hole 15b is prepared in it, piston 16 and the 1st valve 17, and the 2nd

energization member 19, both-way tubing 20, elastic member 21 and valve 22 are attached in the cave hole 15b, and

the contents in the aerosol machine 10 were sideways injected from injection-tip 16b.

[0036] As shown, for example in drawing 5, however, a main body of button 15 is put in bush 15B in bottom case 15A,

and upper case 15C is put and constituted on it. Dugout 15c is prepared in the interior, piston 16 and the 1st valve 17,

and the 2nd energization member 19, both-way tubing 20, elastic member 21 and valve 22 are attached in the dugout

15c, and you may make it inject the contents in the aerosol machine 10 from injection-tip 16b straightly as it is.

[0037] In \*\*\*\*\* 14 shown in this drawing 5, it changes into tubed projected part 15c of \*\*\*\*\* 14 shown in

1 thru/drawing 4, and the 2nd valve 22 is put in a bush 15B. Slot m is formed outside at this bush 15B, and it is

made for the contents of the aerosol machine 10 which blew off from the stem 11 to enter in the pressure room A

through that slot m. In addition, in addition to this, it comes to use the sign used for the part to which \*\*\*\*\* 14 shown

[0038] In drawing 5, the newly attached sign 25 is Mt. Tsunagi which a piston 16 penetrates a core, and is attached and

established in a main body of button 15. Much projected part 25a is projected and prepared upward in Mt. Tsunagi 25.

A sign 26 is covering of the shape of a cylinder which covers the surroundings of a main body of button 15 or Mt.

Tsunagi 25, and attaches and prepares the lower part in the aerosol machine 10. A sign 27 is a cap which puts on

\*\*\*\*\* 14 and is attached in covering 26 at the time of un-using it.

[0039] And while cap 27 is removed and have the aerosol machine 10 in reverse, when using it, pressing projected part

25a of Mt. Tsunagi 25 against a head, depressing a main body of button 15, pushing in a stem 11, carrying out

intermittent injection of the contents in the aerosol machine 10 from injection-tip 16b like the case where it is shown in

drawing 1 thru/drawing 4 henceforth and adhering contents to a head, a head is massaged by the contents which

carry out intermittent injection.

[0040] Now, the longitudinal section of vibration \*\*\*\*\* according to claim 3 is shown in drawing 6 below. The main body of button 35 really built with shaping using the resin impregnated is formed in illustration \*\*\*\*\* 34. While preparing downward stem fitting section 35a which fits the stem of an aerosol machine into a core in a main body of button 35, cave hole 35d of the cross-section round shape opened to one side of the direction of a path is prepared in the upper part.

[0041] And in this example of illustration, stop member 35c which projects in tubed towards the direction to open is prepared in the inner part of cave hole 35b at one. It comes to form 35d of stop sections at the tip of stop member 35c. [0042] Into such cave hole 35b, it connects with a piston 36, the 1st valve 37 is formed free [ sliding ], and the pressure to prepare injection-tip 36b of this \*\*\*\*\* 34 in a piston 36 at the point of main hole 36a. [0043] And the coil-spring-like energization member 39 is formed between inner edge flange 36c of a piston 36, and the fixed bush 38, and the 1st valve 37 is energized to the inner sense with a piston 36 by the energization member 39. [0044] On the other hand, outward elastic section 37a is prepared in the 1st valve 37, and 37d of through tubes which it comes to attach the fixed bush 38 in the inlet port of cave hole 35b by press fit. [0045] It inserts in two peripheral slots on the tip respectively, the resistance ring 41 is formed in the 2nd valve 40, seal section 40a is formed in it on the way, and it comes to form in it diameter expansion section 40c which prepares stop energizes the 1st valve 37 to the inner sense with a piston 36 -- diameter expansion section 40c of the 2nd valve 40 -- the back of cave hole 35b -- pressing -- 37d hole edge of through tubes -- seal section 40a -- pushing -- 37d of through tubes -- closing -- the inside of the pressure room A -- liquid -- it comes to hold densely [0046] And at the time of use, it has the aerosol machine 10 by hand, and injection-tip 36b is turned to the affected part, a finger is hung on fingerplate section 35c, a main body of button 35 is depressed, and a stem 11 is pushed in the aerosol machine 10. Then, the contents in the aerosol machine 10 blow off from this stem 11, enter in the pressure room A of a main body of button 35, and go up the pressure in the pressure room A. [0047] With the rise of the pressure, the energization member 39 is resisted, it slides on the 1st valve 37, and the volume in the pressure room A is increased. Since the tip of the 2nd valve 40 is intruded with friction through the resistance ring 41 in 37d of through tubes, the 2nd valve 40 also moves with migration of the 1st valve 37. [0048] And if the 2nd valve 40 carries out specified quantity migration soon, as shown in drawing 7, step 40b hangs and carries out the stop of the stop member 35c to the 2nd valve 40 with the further migration in 35d of stop sections, friction will be resisted and the 2nd valve will be pulled out from 37d of through tubes -- detaching -- 37d of through tubes -- opening -- seal section 40a -- \*\*\*\*\* -- a passage -- the inside of the pressure room A -- contents are put in in a piston 36 through drawing Nakaya -- straight slot of 37d of the through tube 37c, and it injects from injection-tip 36b through the main hole 36a. [0049] Then, if the pressure in the pressure room A declines with injection, as the 1st valve 37 is returned by the energization force of the energization member 39 and it is shown in drawing 8, diameter expansion section 40c of the 2nd valve 40 is pressed in the inner part of cave hole 35b, the 2nd valve 40 is again intruded in 37d of through tubes, 37d hole edge of through tubes will be forced on seal section 40a, 37d of through tubes will be closed, and injection of contents will be interrupted. [0050] And if the pressure in the pressure room A rises again, contents are injected again, if it falls, injection will be interrupted again and intermittent injection of the contents in the pressure room A will be carried out from injection-tip 36b by this repeat. And while adhering contents to the affected part, the affected part is massaged by the contents which carry out intermittent injection. [0051] Thereby, in vibration \*\*\*\*\* 34 shown in this drawing 6 through drawing 9, since stop member 35c is hung on the 2nd valve 40 with the rise of the pressure in the pressure room A, a stop and the push reliance of seal section 40a to using an elastic member. Moreover, components mark can be reduced by the ability using an energization member only as the energization member 39, and a cost cut can be aimed at.

[Translation done.]

\* NOTICES \*

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. \*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is drawing of longitudinal section of vibration \*\*\*\*\* according to claim 1 in the condition of having attached in the stem of an aerosol machine.  
 [Drawing 2] It is drawing of longitudinal section at the time of valve-opening initiation during the use.  
 [Drawing 3] It is drawing of longitudinal section at the time of full valve opening during the use.  
 [Drawing 4] It is drawing of longitudinal section at the time of clausitium during the use.  
 [Drawing 5] It is drawing of longitudinal section of vibration \*\*\*\*\* according to claim 3 is shown.  
 [Drawing 6] Drawing of longitudinal section of vibration \*\*\*\*\* according to claim 3 is shown.  
 [Drawing 7] It is drawing of longitudinal section at the time of clausitium during the use.  
 [Drawing 8] It is drawing of longitudinal section at the time of full valve opening during the use.  
 [Drawing 9] It is drawing of longitudinal section at the time of clausitium initiation during the use.  
 [Drawing 10] It is drawing of longitudinal section of the conventional vibration \*\*\*\*\* in the condition of having attached in the stem of an aerosol machine.  
 [Description of Notations]

11 Stem  
 14 Vibration \*\*\*\*\*

15-35 Main body of button  
 15band35b Cave hole

15c Tubed projected part

16 Piston

16band36b Injection tip

17-37 The 1st valve

18-38 Fixed bush

19-39 Energization member

20 Both-way Tubing

21 Elastic Member

22-40 The 2nd valve

35c Stop member

35d Stop section

37c Straight-line slot

40a Seal section

40b Step

40c Diameter expansion section

41 Resistance Ring

A Pressure room

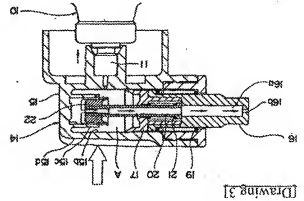
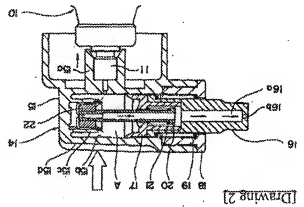
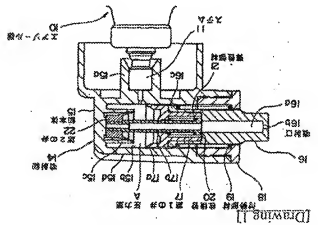
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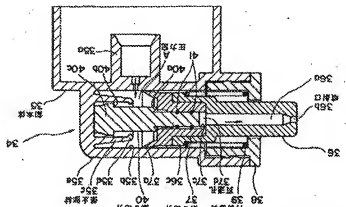
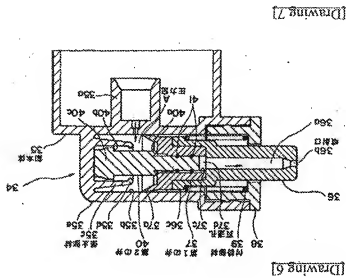
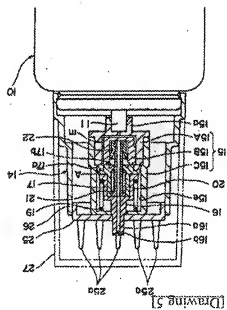
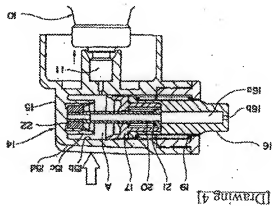
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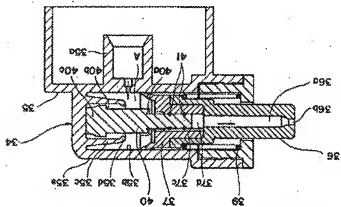
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## DRAWINGS

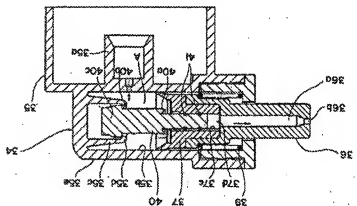




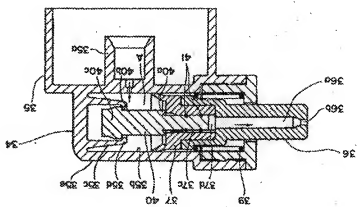
[Drawing 10]



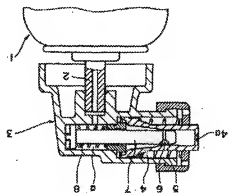
[Drawing 9]



[Drawing 8]



[Translation done.]



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